Coyote Lakes/Alvord-Tule Springs Gather EA

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Vale District Office

Gather Plan for the Coyote Lakes/Alvord-Tule Springs Complex

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Background Information

With passage of the Wild Horse and Burro Act of 1971, Congress found that: "Wild horses are living symbols of the pioneer spirit of the West". In addition, the Secretary was ordered to "manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands". From the passage of the Act, through present day, the Bureau of Land Management (BLM) Vale District has endeavored to meet the requirements of this portion of the Act. The procedures and policies implemented to accomplish this mandate have been constantly evolving over the years.

Throughout this period, BLM experience has grown, and the knowledge of the effects of current and past management on wild horses has increased. For example, wild horses have been shown to be capable of 18 to 25% increases in numbers annually. This can result in a doubling of the wild horse population about every 3 years. At the same time, nationwide awareness and attention has grown. As these factors have come together, the emphasis of the wild horse and burro program has shifted.

Program goals have expanded beyond simply establishing "thriving natural ecological balance" (setting appropriate management level (AML) for individual herds), to include achieving and maintaining viable, vigorous, and stable populations.

The Coyote Lakes Herd Management Area (HMA) and the Alvord-Tule Springs HMA are being managed as the Coyote Lakes/Alvord-Tule Springs complex because of known migration through Sand Gap. The Alvord-Tule Springs Herd Management Area Plan (HMAP) identified cross over between the HMAs in February 1985.

AMLs for these HMAs have been previously established based on monitoring data and following a thorough public review. Documents containing this information are available for public review at the Vale and Burns District offices.

The numbers, age, and sex of animals proposed for removal are derived from The Wild Horse Population Model Version 3.2 developed by Dr. Steve Jenkins, Associate Professor, University of Nevada Reno. Appendix A establishes the parameters used for this HMA's modeling runs.

The Coyote Lakes HMA was last gathered in FY 96 when 151 horses were captured with 17 released back into the HMA. The Coyote Lakes HMA lies southwest of Burns Junction near the Whitehorse Ranch. The topography of the Coyote Lakes HMA varies from flat to slightly rolling hills. There are several steep buttes in the area with rims and rocky out crops. Elevation varies from approximately 4,000 to 5,600 feet. The vegetation is generally salt desert shrub types, composed of shadescale, greasewood, big sagebrush, low sagebrush, spiny hopsage, squirreltail and bluebunch wheatgrass.

The Alvord-Tule Springs HMA was last gathered in FY 97 when 136 horses were captured with 23 released back into the HMA. The Alvord-Tule Springs HMA lies adjacent and to the west and south of Coyote Lakes HMA and includes the Alvord Desert. Much of the area is flat to gently rolling hills,

although the southern portion of the HMA contains steep hills and rimrock with small valleys between. Much of the flat area is dominated by salt desert vegetation, playas, or dunes, and the upper elevations are dominated by big sagebrush communities.

Purpose of and Need for Action

The purpose of the action is to achieve and maintain wild horse AMLs which reflect the normal thriving ecological balance, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, and maintain a healthy and viable wild horse population.

Climatic data documents varying degrees of drought conditions in the area from 1985 to present. During the1999 drought conditions, forage production was estimated to be 25 to 30% of normal. These prolonged “below normal” precipitation conditions have reduced forage production, stressed plants, and the vigor and health of many vegetative communities has declined. Plants are generally in a low vigor condition, grazing has stressed the community even further. Areas near water during the summer and fall of 2000 have been extremely stressed when livestock, wild horses and wildlife concentrated on the few available water sources.

Objectives include:

1. Reduce reproductive rates to levels which will accommodate a minimum 4 year gather schedule allowing for the maintenance of AML.

2. Re-establish the pre-selective removal gather sex distribution toward a more "normal" distribution as indicated by herd sex structure found during the first documented BLM gather in this area.

3. Re-establish pre-selective removal gather age class distribution toward a more "natural" year gather.

4. Re-establish or maintain herd characteristics which were typical of the Coyote Lakes/Alvord-Tule Springs complex at the time of the passage of the Act.

5. Maintain the genetic diversity of the Coyote Lakes/Alvord-Tule Springs complex/herd.

6. Remove approximately 276 horses from the Coyote Lakes/Alvord-Tule Springs complex to attain a thriving ecological balance between horses, wildlife, livestock, and vegetation.

Conformance with Existing Land Use Plans

The Southern Malheur Management Framework Plan (MFP) approved in January 1984 and the

Southern Malheur Grazing Management Program Environmental Impact Statement (EIS) of September 1983 have been reviewed. The Proposed Action is in conformance with these documents.

The 1982 Andrews Management Framework Plan (MFP), the 1983 Andrews Grazing Management Program Final Environmental Impact Statement (EIS), and 1987 Drewsey, Andrews and Riley MFP Amendment have been reviewed. The Proposed Action is in conformance with these plans. Applicable sections from these plans are: pages 34 & 35 with Map 5 of the Andrews MFP; pages 2-11 and 2-12 with Map 5 of the Andrews Grazing Management Program Final EIS; and Appendix 1 of the Drewsey, Andrews and Riley MFP Amendment.

Relationship to Statutes, Regulations, Policies, Plans, or Other Environmental Analyses

This action is governed by the Wild Horse and Burro Act of 1971 (Public Law(PL) 92-195 as amended) and Title 43 Code of Federal Regulations (CFR) part 4700. Gathering and disposal of the wild horses would be in accordance with PL 92-195 as amended by PL 94-579 (Federal Land Policy and Management Act (FLPMA)) and PL 95-514 (Public Rangelands Improvement Act (PIRA)). Section 302(b) of 4700 CFR of FLPMA states that all public lands are to be managed so as to prevent unnecessary or undue degradation of the lands.

The following are excerpts from CFRs:
1) 43 CFR 4720.1 - "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately."
2) 43 CFR 4710.3-1 - "HMAs shall be established (through the land use planning process) for maintenance of wild horse and burro herds."
3) 43 CFR 4180.2(b) - "Standards and guidelines must provide for conformance with the fundamentals of 43 CFR 4180.1."

Gathering excess horses conforms to the Standards and Guidelines (S & Gs) for Grazing Management. These S & Gs were developed with full public participation and in consultation with South Eastern Oregon's resource advisory council. They have been reviewed by the Departmental Review Team which found that they comply with the requirements of the regulations.

The Proposed Action is also consistent with the 1991 Final Oregon Wilderness Environmental Impact Statement and the Endangered Species Act Section 2(c) and 7(a)2.

The Southern Malheur MFP, which constitutes the land use plan for Jordan Resource Area, stresses the prevention of excess utilization of vegetative resources. In addition, the gathering of excess horses is consistent with the 1991 Whitehorse Butte Allotment Plan. This project is consistent with the resource objectives and management strategies of the 1989 Trout Creek Mountain EA and Grazing Decision and the 1985 Alvord Allotment Management Plan. The Proposed Action also conforms with the Coyote Lakes HMAP and the Alvord-Tule Springs HMAP.

Alternatives Including the Proposed Action
The Proposed Action and alternatives represent a reasonable range of alternatives based on the issues and goals identified through public scoping efforts.

Alternative 1 (Proposed Action)
The Proposed Action is to capture approximately 379 wild horses (80%) in the winter of 2001. This would include removing approximately 276 wild horses, determining sex, age and color, acquiring blood samples, assessing herd health (pregnancy/parasite loading/physical condition/etc), conducting immunocontraceptive research and monitoring results as appropriate, and sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10 year age group. This would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Horse and Burro Act and land use plans.

Multiple capture sites (traps) may be used to capture wild horses from the HMAs. Whenever possible, capture sites would be located in previously disturbed areas except in Areas of Critical Environmental Concern (ACECs). All capture and handling activities (including capture site selections) would be conducted in accordance with Standard Operating Procedures (SOPs) described in Attachment 1. Selection of capture techniques would be based on several factors such as herd health, season of the year and environmental considerations.

Determination of which horses would be returned to the range would be based on an analysis of existing population characteristics which are saddle horse type confirmation with some draft horse influence. HMA objectives are to perpetuate the army remount characteristics of the herds.

Alternative 2: (Continue Existing Management)
Under this alternative wild horse management would continue under the current strategy for horse removals. All removals would be based on the Selective Removal Policy (0-5 years of age only.) Management would continue to be conducted utilizing a strategy of issue based designations of excess animals.

Alternative 3: (No Action)
Under this alternative, wild horses would not be removed from the Coyote Lakes/Alvord-Tule Springs complex during the winter of 2001. The existing population of 474 horses would continue to increase at approximately 20% per year.

Alternatives Considered But Eliminated From Further Analysis:
1. One alternative considered was wild horse management using fertility control measures only to

regulate wild horse populations. Periodic capture operations would be required to administer the vaccine to mares, or suitable remote delivery methods would need to be developed. This alternative was eliminated from further analysis since the immunocontraceptive vaccine has not been formally approved by the Food and Drug Administration for management based applications. Even with formal approval, an effective remote delivery methodology (aerial or water based) has not been developed for current formulations. The current data suggest that repeated long- term applications of the vaccine may affect fecundity.

2. Closure of the area to livestock use, or reduction of permitted use, was eliminated from consideration since it would not meet existing law, regulation, policy, nor concur with previous land use plan decisions. The Wild and Free Roaming Horse and Burro Act does not require that these areas of public lands be managed for wild horses but states under Section 2a (Act) that even in case of ranges that are devoted principally for wild horse management, it is not necessary to devote these lands exclusively to their welfare in keeping with multiple use management concept for public lands, but rather that these determinations be made through the land use plans.

Affected Environment

A. <u>Wild Horses</u>

Total area of the Coyote Lakes HMA is167,919 acres. The HMA borders Sheepshead HMA on the north, follows the Burns District boundary to the southwest to T38S R36E, angles northwest along the Whitehorse Road to Crooked Creek, and runs north to T33S R40E, south of Burns Junction. (Map 1).The area lies in the rain shadow of the Steens Mountains, therefore, rainfall is less than eight inches per year.

The Alvord-Tule Springs HMA is bounded on the south end by the Trout Creek-Whitehorse Road. The HMA extends northeast to the Table Mountain area (T31S R38E), and encompasses the Alvord Desert. The HMA is bounded on the west side by the private lands adjacent to the Steens Mountains. The east boundary of the HMA is defined by the boundary between the Burns and Vale BLM districts. (Map 2) Total area of the HMA is 162,363 acres.

The first gather in the Coyote Lakes/Alvord-Tule Springs complex occurred in the Coyote Lakes HMA in 1975 when 20 horses were removed from private land adjacent to the HMA. In 1979 and 1981 there were 518 and 338, respectively, horses removed from the complex. Other horse removals in the Coyote Lakes HMA were 207 removed in 1985, 312 removed in January 1986, 235 removed in July 1986, 203 removed in 1991, and 151 removed in 1996. Horse removals were conducted in the Alvord-Tule Springs HMA separately in 1985 when 67 horses were removed and in 1997 when there were113 horses removed. A total of 2,164 horses have been removed from the complex since 1975.

Last census in the complex was done on June 28, 2000. Current population is 343 in Coyote

Lakes and 131 in Alvord-Tule Springs. Of these 474 horses, 85 were foals under one year of age, which indicates an 18% population increase. It should be noted however, that many mares were heavy with foal during this census indicating that the foaling season was not complete.

Adult horses in the HMAs weigh an average of 950 to 1050 pounds and stand between 14.2 and 15.2 hands, with some stallions being slightly larger. The dominate colors are sorrel, bay, and black with a few pintos and buckskins. Most have saddle horse type confirmation with some draft horse influence. Many of the horses in the complex are descendants of army remount studs. Characteristics of the herds have remained the same since 1975.

This complex has been recognized as migratory. Based on this, census/gather removal operations are being coordinated between the Vale and Burns Districts from this time forward to avoid inaccurate census and inefficiency in gather operations due to migration.

Peak foaling period for these herds is from March through May. Peak breeding period is from April through June. Currently, the existing sex ratio within the complex is approximately 50/50.

Willow Creek, located in Red Mountain North pasture, is the only natural late season water source in the Coyote Lakes HMA. This is supplemented by the Long Draw Pipeline and a private well on the Whitehorse Ranch. The Whitehorse Ranch pumps water for the benefit of the horses and to reduce the impacts to the Willow Creek riparian area during the hot season and fall, even when domestic livestock are not present.

Water is a limiting factor on certain years throughout the Alvord-Tule Springs HMA, with seven perennial springs present in the HMA. Most of the watering areas in the Alvord Allotment (on the north end of the HMA) are in the form of reservoirs, which either dry up on certain years in the summer, or freeze in the winter. The only perennial waters in this allotment are springs in Mickey Basin, Mickey Hot Springs, Sulphur Springs, and Jimmy Spring. Additional seasonal waters are provided by livestock wells.

The Tule Springs Allotment (on the south end if the HMA) has three springs which provide year long water for the horses. These are Tule Springs, Big Sand Gap Springs, and Buckbrush Springs. During the livestock grazing season, 9 wells are activated to pump water for livestock and also provide reliable water for horses.

Forage is allocated for 125 to 250 horses in the Coyote Lakes HMA or 3,000 animal unit months (AUMs.) Inventory data shows that horse have concentrated in the Willow Creek area south of the Whitehorse Ranch. Utilization levels are in the 60 to 80% range within a radius of approximately 2 miles of Willow Creek and are increasing due to the concentration of horses. Several horses have been outside the herd area and on Whitehorse Ranch private lands. Those problem horses should be removed rather than returned to the HMA.

The forage allocation for the Alvord-Tule Springs HMA is for 73 to 140 horses, or 1,680 AUMs. The only perennial waters are springs described above. Therefore, most wild horses that graze this portion of the HMA use the desert during the winter and spring and migrate east during the summer and fall. However, there are bands which stay in a 4-5 mile radius of Mickey Basin and use the area yearlong. Current utilization in these areas are at the upper limit of the acceptable range (50-55%). In these areas, use is season long during critical growth periods for key cool and warm season grasses and shrubs with no rest provided.

There are resident wild horses which graze the Wildcat Creek area during critical growth periods for cool season grasses. The utilization is within acceptable limits 40-45%. However, the numbers of horses using the area has increased in the past several years and in this area also there is no rest provided for key cool season grasses. Utilization levels are increasing towards the upward limits of the acceptable range.

Horses in the Tule Springs allotment, on the southern end on the HMA, primarily utilize the livestock wells for water during the winter and early spring. When these wells are turned off, the horses then move to the west side of the allotment and utilize Tule Springs and Buckbrush Springs. Utilization by horses in these areas is approaching or exceeding the upper limit of acceptable utilization levels.

Another issue driving the Proposed Action is continuing drought conditions in the area leading to water shortage and excessive riparian impacts. The results are degradation of water quality and habitat for threatened Lahontan cutthroat trout in the Coyote Lakes HMA. There is also competition for forage between wild horses, bighorn sheep (BLM special status species), deer and livestock in the Alvord-Tule Springs HMA.

B. Grazing Management

Coyote Lakes HMA

Forage allocations for livestock in the Coyote Lakes HMA is currently 3361 AUMs of active preference. Actual use for livestock for the past five years has been about 500 AUMs less than preference. Livestock grazing reductions made in Red Mountain North pasture within Coyote Lakes HMA, due to lack of water and impacts on Willow Creek, have been voluntary by the permittee. In the Red Mountain North pasture, utilization levels, by wild horses, have been above 40% in the area of Willow Creek on the uplands, with riparian vegetation being browsed in the 60 to 80% range for approximately two miles. Domestic livestock had not grazed the Red Mountain North pasture prior to utilization measurements. Photo points were used to document this use and are on file in the Vale District Office.

Alvord-Tule Springs HMA

Forage allocation for livestock in the Alvord-Tule Springs HMA is 12,478 AUMs of active preference. Livestock grazing in the Table Mountain pasture is 4/1-6/15 every other year with total rest provided in alternate years. Rangeland trend and condition is stable to upward

throughout the Desert and Table Mountain pastures of the Alvord Allotment. The desert pasture is dependent on wells for livestock water which only provide water during the season of livestock use from 11/15 - 4/1. Most of the water holes and slicks provide water until May or June. Horse use is impacting plant community health and will be reflected in rangeland trend and condition if current utilization levels on key cool season grasses is allowed to continue at existing levels. The remainder of the desert has seasonal utilization at or below 40%. Utilization levels are increasing due to wild horse use but are still within acceptable limits.

Rangeland trend is stable to upward throughout the Tule Springs Allotment. Horses are only present in the Tule Springs Pasture, which is grazed yearly by livestock from 11/1 - 3/1. This grazing season does not affect the critical growth periods for key forage species, so the only impact to these species is horse use. Current utilization in many areas of this pasture is well below acceptable levels. However, in areas frequented by horses, (Tule Springs, Buckbrush Springs, and Calderwood Desert Well) utilization is exceeding the maximum acceptable range of 50 - 55%. Utilization in 1999 reached a high of 73% near Calderwood Desert Well. All other areas frequented by wild horses exceeded the 50% utilization level.

C. Wildlife

Pronghorn antelope (Antilocapra americana), and mule deer (Odocoileus hemionus), only infrequently use the HMAs. Some chukar partridge (Alectoris chukar) and sage grouse (Centrocercus urophasianus) are found in the area. A variety of small mammals, reptiles and nongame animals common to southeast Oregon can be found throughout the area.

Forage allocation for deer and antelope in the Coyote Lakes HMA is 30 AUMs. Forage allocation for deer and antelope in the Alvord-Tule Springs HMA in 396 AUMs.

D. Threatened and Endangered/Special Status Species

Davis' peppergrass (Lepidium davisii), is being State listed as Threatened Status and is a species of concern for the US Fish and Wildlife Service. This species is found in three playas within the Coyote Lakes HMA. Recent and past monitoring reveals "excessively heavy" horse use on the playas. The use occurs during times when the playas are wet and being used as a water source for the horses. This continues through most of the summer, causing extensive soil compaction and heavy disturbance. Lepidium davisii is also found on two playas in the Alvord-Tule Springs HMA.

Astragalus solitarius and Allium lemmonii may occur in isolated areas of both HMAs, and both are considered to be "district sensitive".

Lahontan cutthroat trout (Oncorhynchus clarki henshawi), a federally threatened species, inhabits 2.5 miles of Willow Creek in Red Mountain North pasture. When this trout was listed in 1991, this reach of Willow Creek was intermittent and did not provide fish habitat. However, with increased annual precipitation and higher water tables upstream due to

improved riparian conditions, Willow Creek has begun to provide perennial flow in Red Mountain North, and Lahontan cutthroat trout now utilize this reach. Lack of riparian vegetation and eroding banks in Red Mountain North, primarily due to wild horse use, has led to adverse habitat conditions for the trout (Whitehorse Butte Allotment Biological Assessment, 1997). Oregon Department of Environmental Quality (Willow Creek Total Maximum Daily Load, 1999) observed that, due to lack of shade and bank cover, daily maximum temperatures commonly exceeded 27°C (80.6°F) in lower reaches of Willow Creek during July and August. This temperature regime exceeds the incipient lethal limit and approaches the instantaneous lethal limit for Lahontan cutthroat trout. Elevated water temperatures in lower Willow Creek also resulted in elevated pH levels and low dissolved oxygen concentrations.

Kit fox (Vulpes macrotis), a sensitive species in Oregon, inhabits localized areas of the Coyote Lakes HMA. Sage grouse (Centrocercus urophasianus), found within the Coyote Lakes HMA, is a species being considered for listing under the Endangered Species Act. Bighorn sheep, a BLM special status species, are present in the Alvord-Tule Springs HMA. Long-nosed leopard lizards are common throughout Mickey Basin, Tule Springs, and Fields Basin.

E. Vegetation

Vegetation in the HMAs primarily consists of big sagebrush (Artemisia tridentata), low sagebrush (Artemisia arbuscula), shadscale (Atriplex confertifolia), spiny hopsage (Grayia spinosa),greasewood (Sarcobatus vermiculatus), winterfat (Ceratoides lanata), bluebunch wheatgrass (Agropyron spictatum), bottlebrush squirreltail (Sitanion hystrix), and Sandberg bluegrass (Poa sandbergii). The present ecological condition of the vegetation is considered to be in the middle seral stage with static trend.

F. Soils

Soils in the HMAs consist of loamy to clayey shallow, well drained soils over basalt, rhyolite, or welded tuff. Runoff for these soils is slow to medium and permeability is slow to moderate.

G. Riparian Areas/Water Quality/Floodplains

In Coyote Lakes HMA, Willow Creek is the only riparian area. Willow Creek is on the State of Oregon's 303(d) list which indicates that the stream is unable to meet water quality standards. Oregon Department of Environmental Quality (ODEQ) has initiated a Total Maximum Daily Load study on Willow Creek (Willow Creek Total Maximum Daily Load, ODEQ, March 1999). This study identifies wild horse grazing in the riparian area as one of the factors contributing to the stream's degraded condition.

In the Alvord-Tule Springs HMA, the only perennial waters are springs in Mickey Basin and Mickey Hot Springs. Wells provide some extension of range during the winter. Season long grazing near perennial springs, (Tule Springs, Buckbrush Springs, Big Sand Gap Springs), and Calderwood Desert Well, becomes a resource concern as horse numbers increase. Table Mountain pasture has perennial springs and water holes fed from Wildcat Creek.

H. Recreation

The area within the HMAs receives limited recreational use, mainly big game and upland game bird hunting, and wild horse viewing. Concentrated recreation use occurs at Willow Creek Hot Springs, just south of the Coyote Lakes HMA.

I. Wilderness Study Areas (WSAs)

The Alvord Desert WSA (OR 2-74F)**,** East Alvord WSA (OR 2-73A),Winter Range WSA (OR 2-73H), Wildcat Canyon WSA (OR 2-72D), and Table Mountain WSA (OR2-73I), are located within the HMA complex (refer to Attachment 2). There will be aircraft use over the WSAs, however, there will be no surface disturbing activity within the WSAs.

J. Research Natural Area (RNA)/Areas of Critical Environmental Concern (ACEC)

Three existing RNAs/ACECs and one potential ACEC exist within the Alvord-Tule Springs HMA: 1) Borax Lake ACEC, 2) Alvord Desert ACEC, and 3) Mickey Basin RNA/ACEC. The Mickey Basin RNA/ACEC is fenced out from grazing, as is all but 120 acres of the Borax Lake RNA/ACEC. The Alvord Desert RNA/ACEC is unfenced, but is generally not utilized by wild horses or domestic livestock. The unfenced portion of the Borax Lake RNA/ACEC is also generally not utilized by wild horses. In addition, Mickey Hot Springs is a proposed RNA/ACEC and is fenced out from grazing.

K. Other

The following key elements are either not present or not affected by the proposal or alternative.

1. Wild and Scenic Rivers - Not present.

2. Visual Resources - VRM class I, not affected.

3. Air Quality - Not affected.

4. Cultural and Historic Resources - All known and recorded sites will be avoided.

5. Prime or Unique Farmlands - None present.

6. Hazardous Wastes - None known to exist in the HMA.

7. American Indian Religious Concerns- None present.

8. Environmental Justice-Not affected.

9. Invasive Weeds-Not Affected.

Environmental Consequences

Alternative 1: (Proposed Action)

A. Wild Horses

Impacts to wild horses under the Proposed Action take the form of direct and indirect impacts and may occur on either the individual or the population as a whole. Direct individual impacts are those impacts which occur to individual horses and are immediately associated with implementation of the Proposed Action. These impacts include: handling stress associated with the roundup, capture, sorting, animal handling, and transportation of the animals. There would be an additional impact to animals at the isolated injection site following the administration of the fertility control vaccine. The intensity of these impacts vary by individual, and are indicated by behaviors ranging from nervous agitation to physical distress. Mortality of individuals from this impact is infrequent but does occur in one half to one percent of horses gathered in a given round-up.

Treatment area selection protocols have been developed (see Attachment 1/SOP's) which would minimize impacts associated with handling stress and the use of fertility control drugs. There are no indications that these direct impacts persist beyond a short time following the stress event. They would be expected to completely dissipate following release.

Indirect individual impacts are those impacts which occur to individual horses after the initial stress event. Indirect individual impacts may include spontaneous abortions in mares, and increased social displacement and conflict in studs. These impacts, like direct individual impacts, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief skirmish which occurs with most older studs following sorting and release into the stud pen which lasts less than two minutes and ends when one stud retreats. Traumatic injuries do not occur in most cases, however, they do occur. These injuries typically involve a bite and/or kicking with bruises which don't break the skin. Like direct individual impacts, the frequency of occurrence of these impacts among a population varies with the individual. Spontaneous abortion events among mares following captures is very rare.

Population wide direct impacts are immediate effects which would occur during or immediately following implementation of the Proposed Action. They include the displacement of bands during capture and the associated re-dispersal which occurs following release, the modification of herd demographics (age and sex ratios), the temporary separation of members of individual bands of horses, the reestablishment of bands following releases, and the removal of animals from the population. With exception of changes to herd demographics, direct population wide impacts have proven, over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of release. No observable effects associated with these impacts would be expected within one month of release except a heightened awareness of human presence.

The effect of band displacement on a population as a result of gather operations has been observed in several HMAs following releases. Observations have been made of individual and population wide horse response following releases from both the trapsite where particular animals were captured and from the central holding facility where all captured animals were held. Most horses relocated themselves from the release site back to their home ranges within 12 to 24 hours and at times much faster. This redistribution occurred following a brief "reorientation swing" involving horses ranging out from the release site in a curving arc until their bearings were apparently restored. Following this initial random travel, most horses lined out and headed off in a particular direction often without deviating from that line until they disappeared into the mountain or over the horizon. Assertions that horses are simply taking the most direct route away from humans are not accurate, as instances where horses reverse their original direction crossing back in front of the release trailer or holding area are fairly common following the re-orientation swing.

Specialists have also observed horse behavior, following releases, as it relates to bands which are separated at capture. While the affinity of individual animals to their band would be expected to vary, it was a very common observation that mares or studs broke from the group they were released with (unexpected behavior for a social animal exercising the flight response) and headed toward a particular animal or group of animals. Following this activity, the pair or trio of horses continue the re-orientation swing and then lined out together in a common direction. In some cases, individual groups were observed later together in a new area presumed to be the site of their original home range. Some specialists have noted individual mares reassociated with specific studs or mare groups following capture.

The effect of removal of horses from the population would not be expected to have impact on herd dynamics or population variables, as long as the selection criteria for the removal ensured a "typical" population structure was maintained. Obvious potential impacts on horse herds and populations from exercising poor selection criteria not based on herd dynamics includes modification of age or sex ratios to favor a particular class of animal.

Effects resulting from successive removals causing shifts in sex ratios away from normal ranges are fairly self evident. If selection criteria leaves more studs than mares, band size would be expected to decrease, competition for mares would be expected to increase, recruitment age for reproduction among mares would be expected to decline, and size and number of bachelor bands would be expected to increase. On the other hand, a selection criteria which leaves more mares than studs would be expected to result in fewer and smaller bachelor bands, increased reproduction on a proportional basis with the herd, lengthening of the time after birth when individual mares begin actively reproducing, and larger band sizes.

Effects resulting from successive removals causing shifts in age dynamics away from normal ranges are likewise, fairly obvious. Herd shifts favoring older age horses (over 15 years) have been observed resulting in a favoring of studs over mares in some herds. Explanations include

sex based differences in reproductive stress (relative demand for individual contributions to reproduction) and biological stress (timing the most physically demanding period of the annual cycle).

For studs, reproductive stress is based on dominance in the herd and by definition is confined to a fairly narrow period in their lifespan when they are capable of defending a mare group. For mares, recurrent reproductive stress starts as early as age 2 and continues until as late as age 15 or 16, and sometimes as late as 20. Biological stress in wild horses tends to indicate a selection against mares. Biological stress is based on the degree, duration, and timing of biologically demanding activities during the annual reproductive cycle.

For mares, the greatest biological stress is during pregnancy and lactation. In wild horse populations, this occurs in late winter or early spring when forage availability is at its lowest level, and body condition is at its poorest. For studs, biological stress is at its peak during the breeding season. This peak biological demand is in the late spring and early summer and is more suited to a rapid recovery and a lower energy deficit than for mares.

The susceptibility of the older herd to extreme climatic events would depend on the age of the dominant class in the group. Generally, survival rates of horses are very high (exceeding 98%) for mature animals and lower for very young. This survivability declines again at some older age. Similarly, reproductive success also declines at some age. The threshold age at which susceptibility to extreme events and reproductive senescence has not been established. It is reasonable to conclude that the older the population, the more prone it would be to a catastrophic die-off as a result of reduced resistence to disease, lowered body condition, and/or reduced reproductive capacity.

The effects of successive removals on populations causing shifts in herd demographics favoring younger horses (under 15 years) would also have direct consequences on the population. These impacts are not thought of typically as adverse to a population. They include development of a population which is expected to be more biologically fit, more reproductively viable, and more capable of enduring stresses associated with traumatic natural and artificial events.

The Proposed Action would mitigate the potential adverse impacts on wild horse populations by establishing a procedure for determining what selective removal criteria is warranted for the herd. This more flexible procedure of removing horses under 6 years and over 10 years old, would allow for the correction of any existing discrepancies in herd dynamics which could predispose a population to increased chances for catastrophic impacts. The Proposed Action would establish a standard for selection which would minimize the possibility for developing negative age or sex based selection effects in the population in the future.

Population wide indirect impacts would not appear immediately as a tangible effect and are

more difficult to quantify. Population wide indirect impacts are associated primarily with the use of fertility control drugs and involve reductions in short term fecundity of initially a large percentages of mares in a population, increasing herd health as AMLs are achieved, and potential genetic issues regarding controlling contributions of mares to the gene pool, especially in small populations. Again, with implementation of the Proposed Action, these impacts would be expected to be mitigated by an overall lessening of the need to impose fertility control treatments on a high proportion of the mare population, and all mares would be expected to successfully recruit some percentage of their offspring into the population.

B. Grazing Management

The proposed action would allow present livestock use at allocated levels to continue.

C. Wildlife

Wildlife populations in the areas from which horses are gathered by the helicopter would be forced to seek cover in areas adjacent to the flight path. This would not cause them to abandon their normal habitat areas as the disturbance would be of short duration (8 to 10 days) and very localized. Competition for water and/or forage that might exist between wild horses and wildlife would be reduced.

D. Threatened and Endangered/Special Status Species

The proposed action would lessen the trampling impacts to *Lepidium davisii* due to wild horses at the Coyote Lakes playas. Competition for forage between bighorn sheep and wild horses would be lessened. Habitat conditions for Lahontan cutthroat trout would be improved.

The trap sites would not be located adjacent to or on any threatened and endangered or special status species, therefore, there would be no anticipated impact due to the gather.

E. Vegetation

In the immediate vicinity of the catch pens or corrals and the loading chute short-term disturbance would occur. The soil would be compacted and vegetation would be trampled during panel installation by men and vehicles and severely trampled in the catch pen area during the round-up by wild horses, domestic horses, and the wranglers. It is estimated and anticipated that 1 to 3 years would be required for native vegetation to become reestablished under average conditions with no reclamation. The total area of impact per trap would be approximately 2 acres, with less than ¼ acre severely disturbed. Less than one AUM of livestock forage would be temporarily destroyed for one grazing season at each trap site used.

There would be a positive impact to the upland and riparian vegetation by reducing the total numbers of wild horses grazing year long within the HMAs. Lessened utilization would allow critical growth period rest for key cool and warm season grasses. The composition of vegetation would change to a higher percentage of desirable plants, soil cover would increase and erosion would decrease.

F. Soils

Soil loss and compaction would be expected to decrease in those areas near water sources where horses are forced to concentrate.

Soil would be displaced and/or compacted on approximately 2 acres at each site in the construction of the trap panels, use of the access routes, and in the round-up and loading of the wild horses. The area of severe surface disturbance is normally less than 2,000 square feet. Minimal surface wind and water erosion is expected on these areas during the vegetative rehabilitation period (approximately 1 to 3 years).

G. Riparian Areas/Water Quality/Flooplains

The proposed action would limit the intensity of use at water sources and surrounding uplands. Regulating the number of wild horses in the HMAs would protect the water sources and riparian areas and lessen degradation of these resources. Protecting the water sources, riparian areas, and water quality is important to wildlife, recreationists, and livestock.

The trap sites would not be located adjacent to any surface water sources or riparian areas, therefore, there would be no anticipated impact due to the gather.

H. Recreation

No impact is anticipated.

I. Wilderness Study Areas (WSAs)

The proposed action would not impair the area's wilderness values. If the proposal's impacts had existed at the time of intensive inventory, those impacts would not have disqualified the area from being identified as a wilderness study area. Also, the addition of this proposal would not produce an aggregate effect upon the area's wilderness characteristics or values that would constrain the Secretary's recommendation with respect to the area's suitability or unsuitability for preservation as wilderness.

During the gathering operation, the opportunity for outstanding solitude would be temporarily reduced within the two WSAs as a result of the helicopter activity. The panels would be removed upon completion of the gather, eliminating any visual impacts from the trap. The beneficial impacts of removing the horses include an improvement in vegetation, soil, wildlife habitat, and the natural appearance of the entire WSA.

No traps sites would be established off existing roadways within a Wilderness Study Area. Majority of traps would be constructed on sites outside the WSA. Approximately 5 to 10 foot panels would be located along the WSA side of the road, with distance from the edge varying from 1 to 10 feet. The panels would be placed within the disturbed area of the roadway wherever possible and surface disturbance would be held to a minimum. There would be no off road vehicle travel.

J. Research Natural Areas (RNA)/Areas of Critical Environmental Concern (ACEC)

When managed within AML, the Alvord-Tule Springs horses do not exert undue grazing pressure on RNA/ACECs. The proposed action would not impair RNA or ACEC values.

Alternative 2: (Continue Existing Management)

A. Wild Horses

Wild horses would continue to be removed under the selective removal policy (0-5 year old age group only) and using a strategy of issue based removals. Issues include, but are not limited to, drought, riparian degradation, wildlife impacts, or wildfires. A lack of flexibility in the procedure of removing horses over the age of 6 years would continue or cause discrepancies in herd dynamics (i.e. sex ratios, age distribution) which could predispose a population to increased chances for catastrophic impacts. This means that older age groups of horses are more susceptible to die offs than the younger, more vigorous animals.

B. Grazing Management

Same as proposed action.

C. Wildlife

Same as proposed action.

D. Threatened and Endangered/Special Status Species

Same as proposed action.

E. Vegetation

Same as proposed action.

F. Soils

Same as proposed action.

G. Riparian Areas/Water Quality/Flooplains

Same as proposed action.

H. Recreation

Same as proposed action.

I. Wilderness Study Areas (WSAs)

Same as proposed action.

J. Research Natural Areas (RNA)/Areas of Critical Environmental Concern (ACEC)

Same as proposed action.

Alternative 3: (No Action)

A. Wild Horses

The horses would continue to multiply and the population would increase at a rate of 15 to 20 percent per year until the habitat would no longer support the horse population and a natural die off would occur. Until this happens the horses would continue to overuse the available forage and water. The horses would begin to show signs of malnutrition, and a decrease in the population rate can be expected. In concentrated, overabundant animal populations, the individuals become much more susceptible to disease, which would endanger the entire population. Domestic stock in the vicinity could also be threatened by disease. Under this alternative, natural controls would regulate wild horse numbers naturally through predation, disease, and forage, water and space availability. This alternative was eliminated from further consideration due to several factors. Wild horses in the Coyote Lakes/Alvord-Tule Springs complex are not substantially regulated by predators. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95%. This alternative would result in a steady increase in numbers which would exceed the carrying capacity of the range. The Wild Horse and Burro Act of 1971 mandates the Bureau to "prevent the range from deterioration associated with overpopulation", and "preserve and maintain a thriving natural ecological balance and multiple use relationships in that area".

B. Grazing Management

The HMAs would continue to support an existing population of 474 horses. Assuming that livestock and wildlife populations are managed to allocated levels, the carrying capacity of the HMAs would be over allocated. The weight gains of the livestock would decrease as the quality and quantity of available water and forage decreases. The BLM may be forced to suspend or reduce the permitted use of livestock in the area to compensate for the excess number of horses. This in turn, would affect the financial income of these operations.

C. Wildlife

Wildlife populations in the HMAs would be forced to compete for limited water and forage, which would most likely alter use patterns.

D. Threatened and Endangered/Special Status Species

Colonies of *Lepidium davisii* would receive an increase in trampling as a result of the increase in wild horse numbers. This increased use would have a negative impact on the species. Competition for forage between bighorn sheep and wild horses would increase as horse numbers increased. Riparian vegetation browsing, eroding banks by trampling, and increased water temperatures due to lack of bank cover and shade, primarily due to wild horse use would further degrade habitat conditions for Lahontan cutthroat trout.

E. Vegetation

Areas which are presently over-utilized, such as areas adjacent to water sources, would continue to be used excessively. The area of overutilization would continue to increase in both size and degree. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and erosion would increase.

F. Soils

Soil loss and compaction would be expected to increase in those areas near water sources where horses are forced to concentrated. Increased wild horse numbers on uplands and riparian areas would negatively impact soil surface features and would increase erosion in the HMAs.

G. Riparian Areas/Water Quality/Flooplains

Increasing numbers of wild horses in the HMAs would result in greater use and degradation of Willow Creek and associated riparian areas. More wild horses would adversely affect the floodplain and water quality. The vegetation associated with riparian areas would be degraded as the horses would concentrate on it more in the summer. Riparian community types would be lost, community type distribution would be changed, root density lessened, canopy reduced, and there would be decreases in community dynamics, recruitment, reproduction, and survival of desirable riparian species. This would result in an unacceptable decline in water quality through increased sedimentation and an increase in water temperatures.

H. Recreation

Some negative impacts to hunters would occur with degraded conditions for wildlife populations. The visual resources would be negatively impacted with increased use of the water sources and vegetation. There would be increased horse numbers in the area, thus increasing the horse viewing opportunities.

I. Wilderness Study Areas (WSAs)

The increased horse use would impair the wilderness values of the affected WSA's by changing the manner and degree of use. Vegetative changes would occur with the increased use. The negative impacts of not removing the horses include the degradation of vegetation, soil, wildlife habitat, and the natural appearance of the entire WSA. The no action alternative is not in compliance with the Wilderness Interim Management Policy.

J. Research Natural Areas (RNA)/Areas of Critical Environmental Concern (ACEC)

Increases in horse populations would result in changes in grazing use, thus increasing the chances of horses impacting these areas.

K. Cultural

An increased horse population would compound the use near available water sources, and may

damage or displace artifacts in the immediate vicinities.

Cumulative Impacts

Cumulative impacts are impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Alternative 1: (Proposed Action)

The potential for cumulative impact on most of the identified resources other than wild horses is minimal. There would be lessened competition for forage and limited water with fewer numbers of horses. By removing horses without the selective removal policy there would be a restoration of age structure and sex ratio within the bands to historical levels. In addition, a quality cross section of horses in all age groups can be released back into the HMA and older, less desirable or defective horses removed.

Alternative 2: (Continue Existing Management)

Continuing to remove horses under the selective removal policy would contribute to a skewed age structure and sex ratio. Overall quality of the horses would be reduced because of the necessity of turning back unadoptables in other age classes.

Alternative 3: (No Action)

The horses would continue to over populate the HMAs until numbers would reduce or eliminate the herds by natural means. Range condition would deteriorate, watershed cover would be reduced, water quality would be reduced, soil erosion increased,wildlife use patterns and numbers would be altered, and domestic livestock would be eliminated.

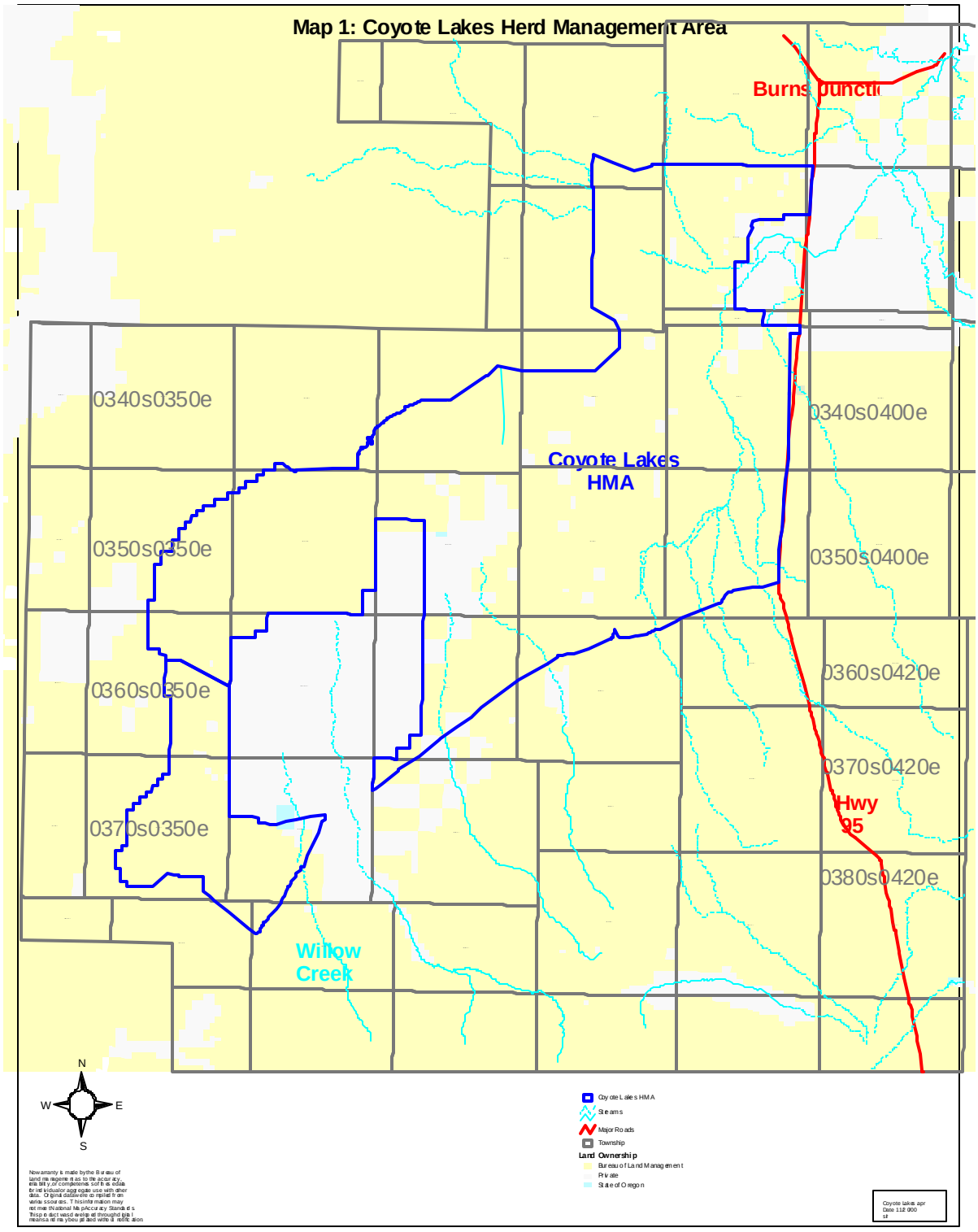
Consultation and Coordination

Public hearings are held prior to gathers using helicopters and motorized vehicles to capture wild horses. During these meetings, the public is given the opportunity to present new information and to voice any concerns regarding the use of these methods to capture wild horses.

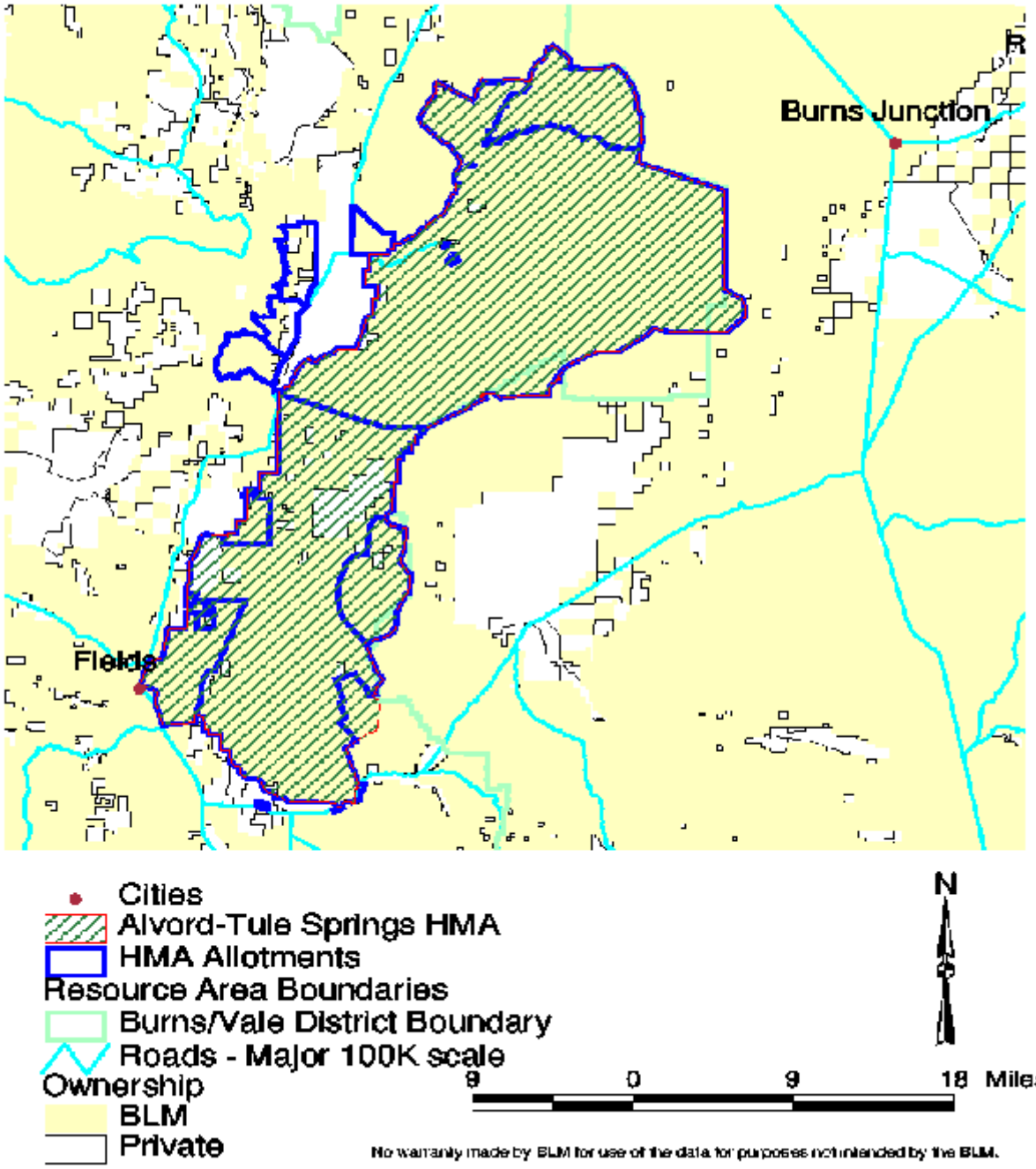
List of Preparers

Jim W. Johnson	Wild Horse and Burro Specialist	Vale District Office
Carolyn Chad	Rangeland Management Spec	Burns District Office
Jim Buchanan	Rangeland Management Spec	Burns District Office

Tom G. Miles	Supervisory Range Conservationist	Vale District Office
Tom Forre	Rangeland Management Spec/Ecologist	Vale District Office
Cynthia Tait	Fish Biologist	Vale District Office
Jean Findley	Botanist	Vale District Office
Shaney Rockefeller	Soil Scientist	Vale District Office
Jon Sadowski	Wildlife Biologist	Vale District Office
Marnie Wilson	Archaeologist	Vale District Office
Tom Christensen	Recreation/Wilderness Specialist	Vale District Office
Randy Eyre	District NEPA Coordinator	Vale District Office


Map 1: Coyote Lakes Herd Management Area
Burns Junctio
0340s0350e
0340s0400e
Coyote Lakes
HMA
0350s0350e
0350s0400e
0360s0350e
0360s0420e
0370s0420e
Hwy
95
0370s0350e
0380s0420e
Willow
Creek
N
W
E
S
Coyote Lakes HMA
Streams
Major Roads
Township
Land Ownership
Bureau of Land Management
Private
State of Oregon

Map 2 - Alvord- Tule Springs Location



USDI, Bureau of Land Management
Jordan Resource Area, Vale District
Vale, OR 97918
Andrews Resource Area, Burns District
Hines, OR 97738

Finding of No Significant Impact
For
Maintaining Viable Populations of Wild Horses
In the Coyote Lakes/Alvord-Tule Springs Herd Management Areas
EA OR-030-01-002

Based on the analysis of potential environmental impacts contained in the Environmental Assessment (EA) and all other available information, I have determined that the proposal and alternatives analyzed do not constitute a major Federal action that would significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared. This determination is based in the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts discussed in the EA have been disclosed. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Vale and Burns Districts, Jordan Resource Area, Andrews Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplains, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern (ACECs). There would be no adverse impacts from invasive, noninvasive species.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of similar nature.

6. This alternative does not set a precedent for other projects that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource-related plans, policies or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural resource surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. All trap locations will be surveyed for cultural and threatened and endangered species. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice policy.

9. No adverse impacts to any threatened or endangered species or their habitat, that was determined to be critical under the Endangered Species Act, were identified.

10. This proposed action is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

_____ _____

Jordan Resource Area Manager Date
Vale District Office

_____ _____

Andrews Resource Area Manager Date
Burns District Office